

in colour for the first time. With exceptions noticed below, every species of butterfly found on the continent of North America from the Gulf of Mexico to the Arctic Circle is thus illustrated. Five of the earlier plates are devoted to larvæ and pupæ.

There are also nearly 200 plain illustrations in the text, illustrating details of the earlier stages of butterflies, apparatus, neurulation, &c., and *Megathymus yuccæ*. The author adds that there are about 125 other species, chiefly Hesperiidæ, which have not been mentioned; but we may take it that these are obscure and little-known species occurring in out-of-the-way parts of the country, and that, as regards all the more accessible parts of North America, his book may be relied upon as practically complete. We regret, however, that the omitted species should not have been included in an appendix, however brief—were it only a mere list of names.

The letterpress is divided into three sections. The Introduction contains four chapters on the Life-history and Anatomy of Butterflies; the Capture, Preparation, and Preservation of Specimens; the Classification of Butterflies; and Books about North-American Butterflies.

The bulk of the book consists of descriptions (necessarily, but not unduly, brief) of the Butterflies of North America north of Mexico, thus covering the whole ground up to the boundaries of Messrs. Godman and Salvin's '*Biologia Centrali-Americana*.' The arrangement followed is *Nymphalidæ* (including *Libytheinæ*), *Lemoniidæ*, *Lyccenidæ*, *Papilionidæ* (including *Pierinæ*), and *Hesperiidæ* (including *Megathyminæ*). Scattered through the book are various digressions and quotations, poetical and other.

We hope that the author will carry out his intention of continuing his work by a book on the Moths of North America likewise, for such a work would be of still greater scientific and general value than even that before us.

Dr. Holland appears to have done his work very well, and we hope that it will also be appreciated on this side of the Atlantic, for there are surely many British and European entomologists who will be glad of an opportunity of making themselves acquainted with a fauna which presents such a remarkable resemblance to our own; though, apart from the presence of some purely American or representative forms, the proportion which the number of species of the various groups bears to each other in Europe and North America is often strangely different; for example, the *Satyrinæ*, which form the bulk of the middle-sized butterflies in Europe, are very poorly represented in North America.

## MISCELLANEOUS.

*Note on Ceroplastes africanus (Family Coccidæ).*

By E. E. GREEN, F.E.S.

THE following is an extract from a letter I have received from Mr. E. E. Green. I think I shall best fulfil his wishes by publishing it as it is.

CHAS. O. WATERHOUSE.

"Prof. Cockerell has drawn my attention to the fact that he published a description of a *Ceroplastes egbarum* (from W. Africa) in the 'Entomologist' of May 1899. He has also sent me typical examples of the insect, which show me that it is identical with my *C. africanus* (var. *cristatus*) [Ann. & Mag. Nat. Hist. 1899, iv. p. 190]. Prof. Cockerell in his description gives the number of antennal joints as six only, but he particularly mentions that his specimens were not in very good preservation. . . . I should be greatly obliged if you would send a short note to the 'Annals and Magazine' to correct the name."

E. ERNEST GREEN.

*On the Lateral Cephalic Organs of Glomeris.*

By N. DE ZOGRAF.

The celebrated German anatomist Francis Leydig has depicted, on one of the plates accompanying his unfinished work 'Ueber den Bau des thierischen Körpers,' published in 1864, a head of *Glomeris*, having on its lateral walls two horseshoe-shaped organs presenting in their interior a somewhat considerable cavity which communicates with the outside by means of a very narrow longitudinal slit. Leydig has shown that the internal wall of these organs is very thick, that it is innervated by a branch coming from the neck in the region of the optic trunk, and hence that these structures ought to be looked upon as organs of sense.

Following Leydig, the Hungarian zoologist Cömösvary described the same organs in several myriapods without giving a more detailed account of them; it is by the name of *Cömösvary* that they are to-day designated. The French zoologist Saint-Rémy and the German entomologist Curt Hennings so call them, the latter having given a description of their histology in the third number of the 'Sitzungsberichte der Gesellschaft naturforschenden Freunde zu Berlin' for the year 1899.

In my article on the relationships of the Arthropoda, published in 1892 in the 'Comptes Rendus du Congrès international de Zoologie,' I pointed out what great morphological interest these organs possess, especially if they are compared with the embryonic cephalic grooves of other myriapods, of some insects and crustaceans, and with the cephalic organs of some annelids, for example the Capitellide. Unfortunately *Glomeris* is very rare in Russia and only met with in the south-western portion of the empire: it was not therefore until the summer of 1898 that, through the kindness of M. E. Bouvier, Professor at the Jardin des Plantes, I was able to obtain enough material for my researches. I then received specimens of *Glomeris marginata* which M. Bouvier had collected in the forests in the neighbourhood of Dieppe. Every animal composing two successive consignments had perished during the long journey from Dieppe to Moscow; but a third batch sent after the great heat of the summer arrived safe and sound at Moscow, and provided me with material for my researches.

The lateral cephalic organs of *Glomeris* have a very curious and